

ABSTRACT

The present invention reveals the stereostructure of decarbamylase by X-ray crystallography and provides a
5 decarbamylase mutant, which is more useful for industrial applications, obtained by molecular design utilizing the stereostructure for the purpose of improving the reactivity of decarbamylase to D-N-carbamoyl- α -amino acid which is a substrate thereof. Specifically, the present invention
10 relates to the stereostructure of decarbamylase determined by X-ray crystallography; a stereostructure model of a decarbamylase mutant; a stereostructure model of a complex thereof with a substrate, a product, and the like; a molecular design method utilizing these stereostructures; a
15 decarbamylase mutant obtained by the method; and a method for designing and producing a protein mutant having a structure similar to that of decarbamylase.